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# MSS - Configuration Management

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**ECS Release A SDPS/CSMS Critical Design Review  
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# Configuration Management Overview



**Configuration Management provides the following functional capabilities:**

- **Tracking of baselined configurations of hardware, software, and documentation**
- **Software version control**
- **System change requests submittals and status tracking**

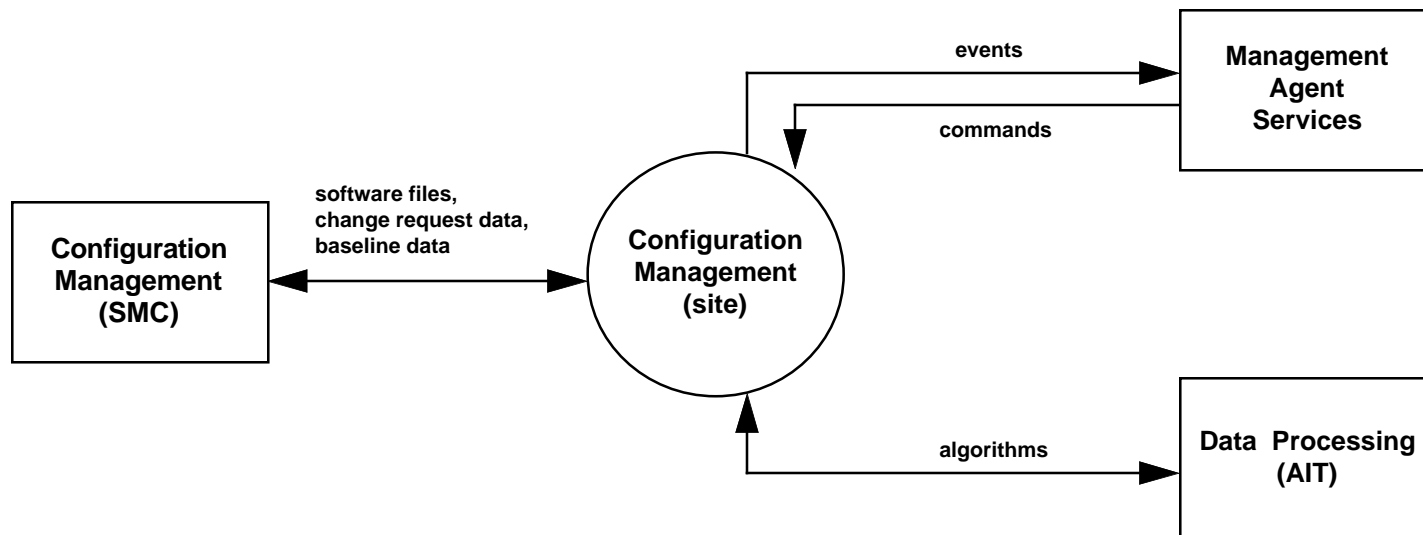
## **COTS Selections**

- **ClearCase for controlling changes to custom s/w**
- **Distributed Defect Tracking System (DDTS) for managing system change requests**
- **Baseline Manager selection in final verification**

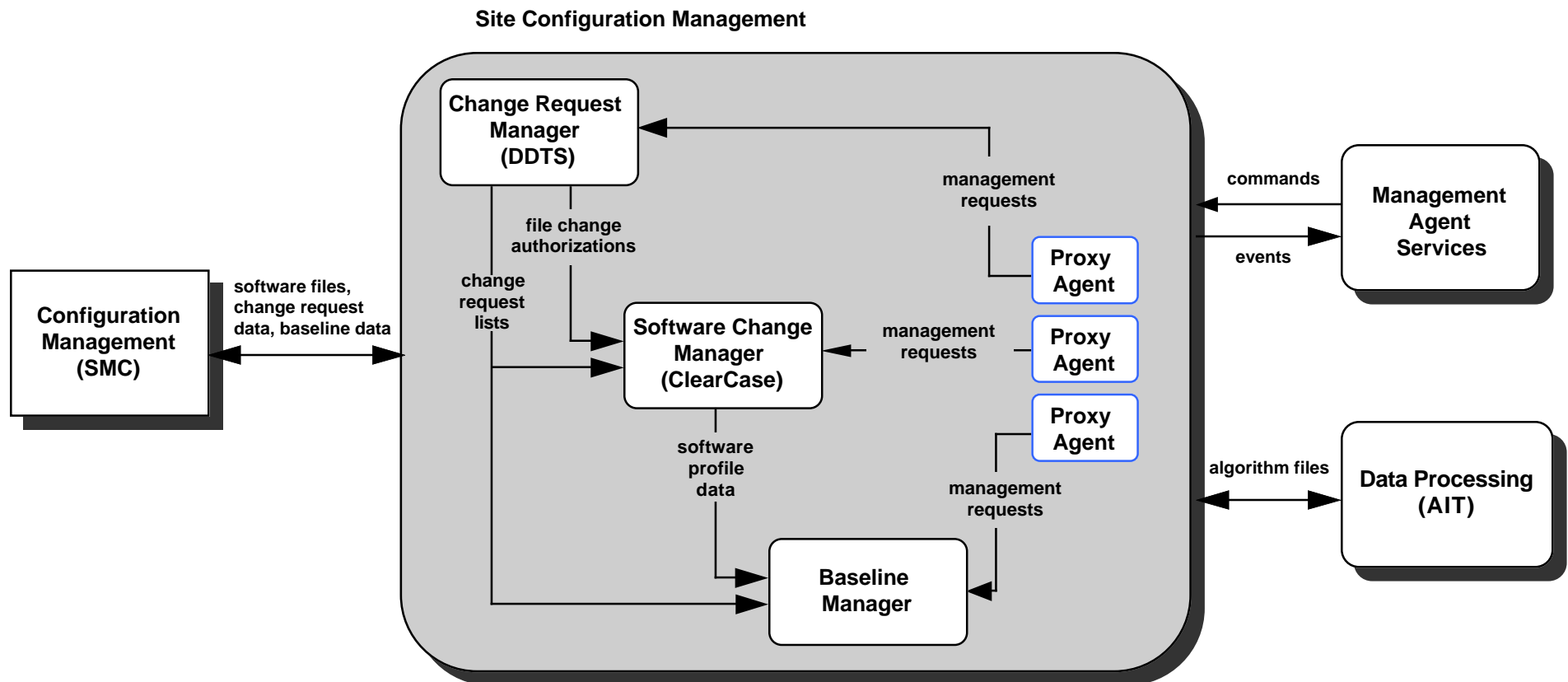
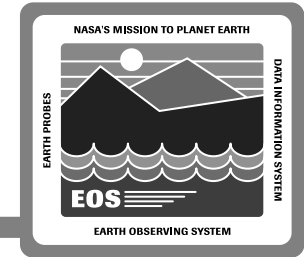
## **Views**

- **LSM maintains site CM records**
- **SMC maintains system-wide CM records**

# Configuration Management Context



# Configuration Management Design



# Configuration Management Design Description

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## Components

- **Change Request Manager CSC**
  - Composes Change Requests
  - Registers Change Requests
  - Tracks Change Request Status
  - Provides Reports
  - Processes Management Agent Requests
  - Consists of COTS + Scripts

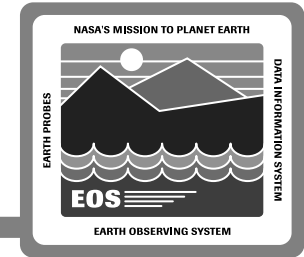
# Configuration Management Design Description (Cont)

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- **Software Change Manager CSC**
  - **Maintains Software Libraries**
  - **Performs Software Version Control**
  - **Builds Software**
  - **Maintains Audit Trail of Software Changes**
  - **Provides Reports**
  - **Processes Management Agent Requests**
  - **Consists of COTS + Scripts**

# Configuration Management Design Description (Cont)



- **Baseline Manager CSC**
  - **Profiles Baselines**
  - **Profiles Baselined Hardware and Software Resources and their interdependencies**
  - **Provides Reports**
  - **Processes Management Agent Requests**
  - **Consists of COTS + Scripts**
- **Proxy Agent CSU**
  - **One for each COTS application**
  - **Provides lifecycle services (e.g. startup, shutdown)**
  - **Reuse of ECS custom software**

# Configuration Management Design Description (Cont)

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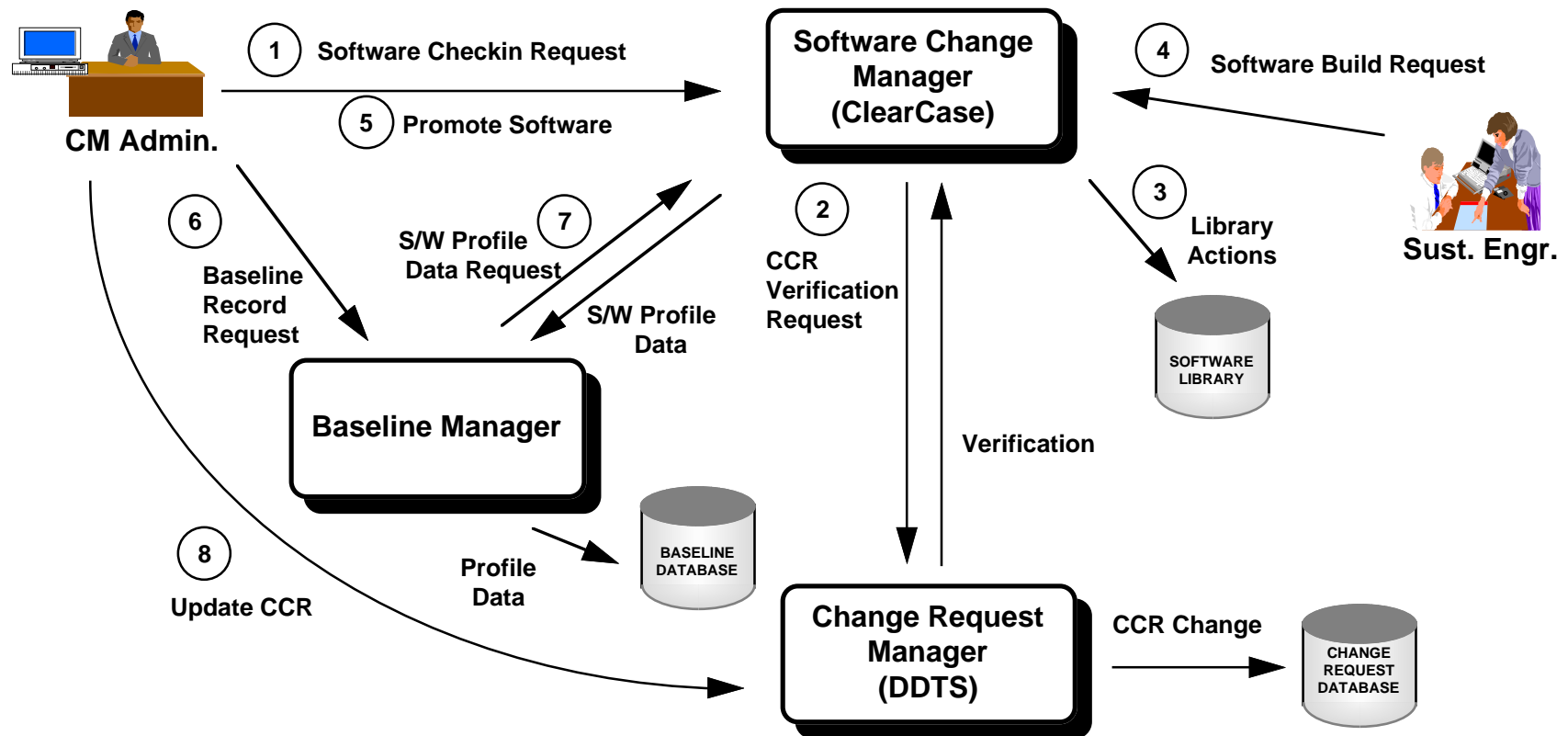
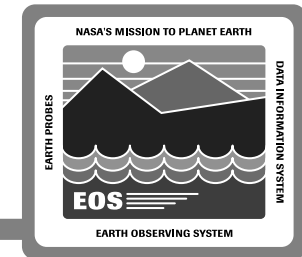


## Interfaces

- **CM Service Managers**
- **Management Agent Services**
- **Data Processing (AIT)**
- **SMC**



# Custom S/W Enhancement Scenario



# Custom S/W Enhancement Scenario Description

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1. **CM administrator invokes ClearCase to load the software into the library.**
2. **ClearCase invokes DDTS to verify the CCR number entered.**
3. **ClearCase checks software into the library. CM Admin notifies Sustaining Engineer.**
4. **Sustaining Engineer invokes ClearCase to build software executables. Sust. Engineer tests and determines that software is ready for production.**
5. **CM Admin. invokes ClearCase to promote software to production status.**
6. **CM Admin. invokes the Baseline Manager and creates a baseline record.**

# Custom S/W Enhancement Scenario Description (Cont)

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7. **Baseline Manager requests and gets data from ClearCase and then creates a profile for the new software version.**
8. **CM Admin. invokes the Change Request Manager and updates the status of the CCR.**

# Summary

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- **Provides tools that track and help control changes to the deployed hardware, software, and documentation**
- **COTS intensive service**
- **COTS supports extension of functionality for future use**
- **Reduced maintenance cost**